

Before The
Federal Communications Commission
Washington, D.C. 20554

In the Matter of

Second Periodic Review of
the
Commission's Rules and
Policies
Affecting the Conversion

To Digital Television
MB Docket No. 03-15
RM 9832

Reply Comments of Golden Orange Broadcasting Co., Inc.

Golden Orange Broadcasting Company, Inc., licensee of KDOC-TV/DT in Anaheim, California, hereby submits its initial comments as *reply comments* with respect to distributed transmission networks. KDOC agrees with the technical analysis and conclusions tendered by the **Merrill Weiss Group, LLC**. We believe the Commission should immediately authorize the use of distributed transmission techniques as a tool for broadcasters to overcome a variety of transmission difficulties and to enhance their services to the viewing public. KDOC further concludes that *distributed transmission networks* would be particularly beneficial in expanding digital services.

KDOC engineers do not wish to comment on the modeling of interference or contour calculations applicable to distributed transmitters. We are confident that this technology can work well in many areas, especially in California, and Merrill Weiss has done an excellent job in establishing what is ultimately feasible. We believe, however, that there are other problems related to the methodology for determining site locations and radiation patterns for the proposed distributed transmitters that will require some regulatory flexibility to achieve an effective result. Consequently, we submit our comments in support of an alternative method of establishing the overall geographic area within which distributed transmitters ought to be permitted.

Mountain Terrain, Obstacles to Single Transmitter Model

There are severe terrain obstacles to overcome in several large markets such as Los Angeles, Pittsburgh, San Francisco, and Seattle, where distributed transmitters could extend service into remote, isolated communities. KDOC offers its own experience in the Los Angeles area as an example of how distributed transmitters might be regulated in order to create the best overall public benefit. The single, high-power transmitter model that has become the universal stereotype in most of the country may not be the

best approach in the Los Angeles area. There are long ranges of tall mountains isolating regions that otherwise would be within reach of the Mt. Wilson antenna farm above Los Angeles. It is also undeniable that the communities beyond the mountains are growing in size and population very rapidly. To maintain a competitive position in the TV marketplace, most stations are compelled to extend their services into those remote areas. In the analog world, stations applied for boosters and translators until the spectrum became nearly saturated.

Problems with Contour Calculations

Up to now, booster transmitters have been the solution of choice to provide analog service beyond the mountains, provided there was sufficient area within the projected NTSC Grade B contour to contain such a service. As it applies to digital service, we perceive a flaw in establishing an equivalent to computing the Grade B contour as the confines of all distributed transmitter signals. In Los Angeles under the NTSC rules, broadcasters are forced to design and utilize antenna patterns that provide large amounts of signal radiating toward areas cut off from direct service by the mountains. This is necessary in order to establish, on paper, a Grade B contour sufficiently extensive to allow the placement of boosters where they are needed to enable

service to the outlying and over-the-mountain communities. What is troubling about this is that both the station's engineers and the Commission's engineers know full well that virtually none of the signal sent toward these mountains will serve anyone either on the near side or on the far side. The conclusion that, technically, all the energy directed toward these mountain ranges serves nobody is inescapable. It makes no logical sense to us that it has become administrative policy to routinely ignore this fact. In the case of Los Angeles, there is virtually no audience reachable from the Mt Wilson antenna farm through a full one-third (120°) of the azimuth arc. Consequently, if a station is operating with an omni-directional antenna pattern, approximately one-third of its transmitted energy is wasted. Signals radiated toward the mountains most often do more harm than good to general coverage where the reachable populations exist. The only reason a station would deliver a signal in these directions is to chart an administrative "line in the sand," giving them the right to fill in these desert areas with on-channel boosters or other means at a later date. In practice, the signals radiated toward the mountains sometimes reflect back into the metropolitan areas, causing interference with the direct signal. Residual energy that actually does diffract over the mountains represents unnecessary interference to a booster signal operating in the desert. The signals

radiated toward the mountains are only administratively productive, while destructive in actual practice.

Utilization of DMA as Inclusive Service Area

As the Merrill Weiss Group explained in its comments, an alternative in determining the acceptable sites for digital distributed transmitters would be preferable to the current method used in the terrestrial analog world. KDOC would go a step further in adding that such criteria ought to apply to both analog and digital services. We find little difference between analog boosters and digital distributed transmitters for administrative purposes. Within the Los Angeles geographical area, we strongly favor utilization of the actual **Designated Market Area** (DMA) by some reasonable formula, when it extends beyond the predicted B contour, as the preferred method for determining the location and maximum service area of distributed transmitters. Ultimately, we feel, this approach would be less burdensome administratively to Commission engineers and staff. In this context it is imperative that distributed transmitters be treated as primary so that if stations choose to utilize distributed transmitters in lieu of extending virtual contours on a piece of paper, they will get the same protection. We, therefore, encourage the Commission to

adopt rules for distributed transmitters to be treated on a primary basis under Part 73 rather than secondary in Part 74.

Golden Orange Broadcasting is highly sensitive to the need to establish service areas by some reasonable means in order to prevent signal overlaps and insurmountable interference. In our not-so-unique terrain, however, the existence of impenetrable mountains is virtually ignored in predicting the Grade B contour on a map. Even though it is unarguable that no usable signal will arrive at the contour location, our consulting engineers must draw the maps anyway, and the Commission regards the obvious self-deception to be determinative. The worst part of this process is that the Rules force broadcasters to generate and radiate energy in unproductive directions simply to preserve the right to install fill-in transmitters at a later date. This process wastes prodigious amounts of electricity just to place lines on a map, not to mention the higher capital equipment expenditures needed to achieve compliance unnecessarily.

Distribution of Transmitters and Energy Conservation

This commenter has all of its broadcast property located in California. Many California television stations, especially those on Mt. Wilson, are consuming approximately one-third (1/3) more power and installing correspondingly larger

transmitters than necessary primarily for the satisfaction of an administrative ritual. There is a very serious and real energy crisis in California. It ought to be troubling to broadcast regulators that stations are throwing away more energy attempting to reach some smaller desert communities (with no chance of success) than it would take to actually power some of those communities. In the real world and in our considered opinion, this represents bad public policy and runs counter to the public interest, especially in California. In our opinion, the FCC has an opportunity to adjust the methodology by which protected contours are determined or substitute other criteria for granting signal enhancement sites. For example, the current contour method could be retained but augmented by inclusion of the subject DMA. We think an *inclusive DMA* rule would be a welcome relief in this rugged-terrain market and those in similar situations across the country.

Bringing the argument back to California, in addition to all the other benefits to the public afforded by the use of distributed transmitters and boosters, we believe all government agencies must evaluate their policies and procedures with respect to *energy conservation*. In our opinion, if a procedure or rule wastes energy unnecessarily and an efficient alternative exists that would not be significantly more burdensome administratively, then the former rule must yield to a more central public policy goal

of saving energy and thereby protecting the environment. The FCC ought to promote any practical method of providing service to the vast general public, especially within that station's DMA, while utilizing the minimum amount of power necessary. Distributed transmission networks can be an indispensable tool in bringing about the twin goals of expanded service and energy conservation.

Conclusions

The technology of distributed transmission can be an extremely valuable tool for many broadcasters for saving capital, energy, and in providing expanded DTV service to the public. With only slight revision to its Rules, the Commission can and should provide for routine licensing of distributed transmission systems and boosters. Since, utilization of distributed transmission systems will help accelerate the DTV transition in a spectrally and energy efficient manner, Golden Orange Broadcasting Co., Inc., submits that the rule changes supported herein represent good public policy, beneficial to the citizens, the environment, and the industry.

**Reply Comments of Golden Orange Broadcasting
Co., Inc.**

Respectfully submitted,

/s/ _____ May 21,
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These comments dated May 21, 2003 supercede any earlier version that may have been inadvertently mailed to the FCC.